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NEW METOPIIDAE AND TACHINIDAE FROM AFRICA (DIPTERA)

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Descriptions of the species included in this paper are presented at this time in order that the names may be available for studies on the biology of the species. Unless otherwise stated the types are in The American Museum of Natural History. At least paratypes of all the species are deposited in this institution.

Metopiidae

Calliphora insignis, new species

Distinguished from *flavicauda* by the wider front of the male and the much finer frontal bristles of the female. Length, 8 to 11 mm.

MALE.—Head blackish, cinereous pollinose, the pollen on the parafacials and parafrontals silvery and tessellate. Front wider than the ocellar triangle, with about eight pairs of fine frontals and many bristly hairs; ocellars long. Frontal vitta brown, obsolete for a short distance in front of the ocelli. Pile black, yellowish below the neck. Parafacials with black hair above; facial ridges with fine bristles on more than the lower half. Palpi and antennae blackish. Eyes bare.

Thorax blackish, the dorsum with bronze reflection and with rather thick cinereous pollen in front, the posterior third and pleura less densely pollinose, the five dark vittae narrow and limited to the presutural area except for obscure spots near the middle of the posterior half. Acrosticals 2-3; dorsocentrals 3-3; sternopleurals 2-1. Disc of scutellum thinly pollinose; four pairs of marginals and one pair of discals. Hair wholly black. Anterior spiracle reddish brown.

Legs dark brown, with black hair.

Wings cinereous hyaline, the base more or less broadly pale brownish. Squamae brown with whitish border and fringe, the discal hair brown. Halteres yellow.

Abdomen metallic purplish blue, the apices of the segments darker, the basal half or more cinereous or cinereous white pollinose; apex of fourth segment rather narrowly yellow. Third and fourth segments with row of marginals, the fourth with irregularly placed discals. Hair wholly black.

FEMALE.—Front not as wide as one eye; eight or nine pairs of rather fine frontals, the upper pair stronger and divaricate-reclinate; apex of fourth segment rarely only obscurely yellow.

TYPES.—Holotype, male, and allotype, female, Buaea, Nigeria, in Deutsches Entomologisches Institut. Paratypes, thirteen males and seven females, Mt. Cameroon, Nigeria (F. Zumpt).

Strongyloneura cuthbertsoni, new species

Green, the middle of the abdomen bronzed above in male, mostly cupreous in female; wings brown on apical third. Length, 7 to 8 mm.

MALE.—Head black in ground color, densely grayish pollinose, a large spot below the middle of the parafacials and the anterior two-fifths of the cheeks shining black. Eyes separated by a distance almost as great as the width of the ocellar triangle. About seven pairs of frontals and a few bristly hairs above them. Ocellars long and strong; postocellars well developed; outer verticals absent. Cheeks almost one-third as wide as the eye-height, with rather fine black hair. Parafacials wide, with a few short black hairs on the inner half. Palpi reddish. Antennae black, the third segment brown or brownish red; arista with long black rays.

Thorax bright green, with thin cinereous ochraceous pollen. Acrosticals 2-3, the anterior pair rather short; dorsocentrals 2-4; sternopleurals 1-1; three pairs of marginal scutellars and a pair of discals. Hair black, mostly yellow on the sternopleura and on the pteropleura.

Legs black or dark brown; middle tibiae with a single anterodorsal bristle.

Wings very pale brownish, with the costal border broadly, and the apical third except on the broad posterior border, brown; apical cloud distinctly separated from the dark costal border beyond the tip of the first vein. Squamae yellowish brown, the bases yellow. Halteres yellow.

Abdomen bright green on the sides and with cupreous genitalia. Along the broad middle line above and below, thoroughly bronzed, the bronze color spreading out on the posterior half of the segments to form wide, incomplete fasciae. The dorsum of the abdomen is thickly covered with cinereous pollen which, from posterior view, wholly conceals the ground color. The marginal bristles on the segments are weak and appressed on the dorsum of all but the last segment, becoming long at the sides. Second genital segment large and prominent and bearing many bristles. Abdominal hair black, only the first and second sternites bearing whitish pile.

FEMALE.—Front half as wide as one eye, the parafrontals shining black, with a large spot of sericeous pollen on each side at the lower third, a small orbital spot of yellowish near the middle and another spot above the upper proclinate bristle. Outer verticals more than half as long as the verticals; parafacial hairs very inconspicuous. Squamae white, the lower lobe with slight grayish tinge. Abdomen mostly cupreous, with a narrow, dark median vitta on the basal half; marginal bristles on third segment erect.

TYPES.—Holotype, male, and allotype, female, Vumba Mountains, Southern Rhodesia, March, 1935 (A. Cuthbertson). Paratype, male, Vumba Mountains, January 18, 1935 (Major Drysdale).

This species is closely related to *terminata* Wiedemann but is very distinct. The eyes are more widely separated and the parafrontals less thickly pollinose; the bristles on the genitalia are more numerous and most of them are longer; the outer forceps are not recurved and the posterior forceps not reddish and contorted. In *terminata* there are only a few pale hairs on the pteropleura. Both *distinguenda* Villeneuve and *nigrohirta* Malloch have the thorax wholly black-haired.

Strongyloneura sheppardi, new species

Bright green, the abdomen densely grayish pollinose and without trace of median dark vitta; wings only very slightly darkened apically. Length, 9 mm.

MALE.—Middle of face reddish or yellowish, the cheeks mostly reddish on the anterior half; head otherwise black in ground color and with cinereous white pollen, the occiput with ashy pollen. Front at narrowest part distinctly wider than the ocellar triangle; nine or ten pairs of frontals, the upper one or two hair-like. Ocellars long; postocellars not developed; outer verticals absent. Cheeks more than one-third the eye-height, wholly pollinose and pale yellowish or white pilose. Parafacials with a few microscopic, scattered hairs. Palpi reddish. Antennae reddish, the third segment brown on upper half or less.

Thorax bright green, rather thinly yellowish cinereous pollinose above and with whitish pollen on the sides and on the anterior slopes of the mesonotum. Chaetotaxy as in *cuthbertsoni*. Hair black, pale yellow on the pleura, with the exception of the mesopleura, where it is coarse and black.

Legs black, the tibiae and most of the first segment of the tarsi, reddish.

Wings with luteous tinge, the apex broadly cinereous, the base yellowish; second vein slightly clouded with yellowish brown on the apical half. Squamae white with the rim more or less yellow. Halteres yellow.

Abdomen so densely grayish pollinose as to conceal the ground color, except laterally where it is green basally but becomes bronzed on the apical segments. Second genital segment rather small, bronzed or blackish, the first blue-green. Hair black, yellow on the basal three sternites, the apices of the second and third with black bristly hairs apically. Marginal bristles very weak and appressed except on the sides and on the fourth tergite; a row of discals on the apical third of the fourth segment.

FEMALE.—Front a little more than half as wide as one eye, cinereous pollinose; abdomen with slightly thinner pollen; fourth segment with a row of discals across the middle or slightly behind this point.

TYPES.—Holotype, male, and allotype, female, Balla Balla, Southern Rhodesia, March, 1931 (A. Cuthbertson). Paratypes: female, Balla Balla, April, 1933 (Cuthbertson); male, Umtali District, Southern Rhodesia, November 26, 1931 (P. A. Sheppard).

This species is close to *dubiosa* Villeneuve but the widely separated eyes of the male are distinctive and the pollen of the head has no yellow tinge; there are fewer hairs on the parafacials and they are darker. Almost all specimens of *dubiosa* have the mesopleura wholly pale-haired, a character that is apparently not found in *sheppardi*.

Strongyloneura darwini, new species

Green, the ground color partly concealed by pale pollen; face with bare spot on each side below; basicosta brown; antennae wholly reddish. Length, 10 mm.

MALE.—Head black in ground color, the middle of the face and the soft part separating face and cheeks reddish; pollen cinereous; a large spot on each side of the parafacials below the middle and almost the anterior third of the cheeks bare. Eyes separated by less than the width of the ocellar triangle; eight or nine pairs of frontals

and a few scattered hairs outside them; ocellars long, the postocellars slightly developed. Outer verticals absent. Cheeks a little more than one-third the eye-height, with fine black hair. Parafacials wide, with short black hair on lower half and a few scattered hairs above. Palpi reddish. Antennae wholly reddish, reaching a little more than halfway to the vibrissae.

Thorax brightly green, moderately covered with cinereous or cinereous white pollen; a pair of weak, narrow cupreous dorsocentral vittae visible in some lights. Acrosticals 3-5 or 6, the chaetotaxy otherwise as in *cuthbertsoni*.

Legs black, the front femora sometimes mostly green.

Wings with luteous tinge, the costal border narrowly brownish. Squamae white. Halteres yellow.

Abdomen bright green on the sides and venter, the dorsum so thickly cinereous pollinose that the ground color is obscured. Fourth segment with discals on the apical third and on more than the apical half at the sides. Hair black, yellowish only on the first and basal half of the second sternite, the sternites blackish. Genitalia small, the basal segment green, the second black.

Types.—Holotype, male, Darwin, Southern Rhodesia, March, 1933. Paratypes, male, Darwin, March, 1933, and male, Salisbury, Southern Rhodesia, February 27, 1910.

This species somewhat resembles *griseoviridis* Bezzi but is larger and that species has the epaulet and basicosta reddish.

Tachinidae

EUTRIXINA, NEW GENUS

Very similar in structure to *Eutrixia* Couquille of North America but with the apical cell moderately long petiolate and infrascapular setulae absent.

Upper half of front linear in male, the frontal bristles confined to the anterior half, short and weak, all above the base of the antennae; no parafrontal hairs; ocellars little longer than the ocellar triangle; verticals very short. Frontal vitta linear except in front. Lower occiput swollen. Cheeks almost one-third the eye-height, chitinized on about the posterior half. Parafacials very narrow, bearing a row of very short hairs. Facial depression oval, moderately deep and with a low median carina, occupying about the upper half of the face, the middle of the face narrowed and receding below the depression. Oral margin bordered by a single row of weak bristles that extend along the facial ridges to slightly above the vibrissal angles. Proboscis short. Labellae large, produced posteriorly; palpi of normal length, gently clavate, haired on apical half. Antennae short, not reaching to the lower edge of the facial depression, the third segment not half longer than wide, its width about equal to the length of the second segment, its apex convex. Arista bare, swollen on the basal sixth. Eyes bare. Acrosticals 0-1; dorsocentrals 2-3; one sublateral and one supra-alar, no posthumeral; two sternopleurals; three pairs of marginal scutellars, the apical pair parallel; propleura and prosternum bare. Legs of normal length; each tibia with two posterior bristles, the hind tibiae with two anterodorsals. Pulvilli shorter than the last tarsal segment. A single bristle at the base of the third vein; no costal spine; petiole of apical cell from one-third to one-half as long as the apical crossvein; the posterior crossvein joins the apical cell nearer to the bend of the

fourth vein than to the anterior crossvein. Squamae large, extending inward posteriorly. Abdomen elongate oval, gently tapering posteriorly. No dorsal bristles on the first two segments but rows of marginals on the last two, those on the third segment weak and appressed. First segment with a group of five laterals, the second with two lateral marginals. Genitalia small, transverse. Sternites fully exposed.

GENOTYPE.—*Eutrixina fasciata*, new species.

***Eutrixina fasciata*, new species**

Yellowish, the thorax black in ground color. Length, 5.5 to 6.5 mm.

MALE.—Head rather reddish yellow in ground color, the occiput blackish except below; pollen white on face and front, cinereous on the occiput, the soft part of the cheeks brownish yellow, the lower section of the face shining brown on the upper part. Palpi reddish yellow, the proboscis brown. Antennae reddish, the third segment mostly and the arista, brown.

Humeri yellowish in ground color, thickly cinereous pollinose; mesonotum with four moderately wide blackish vittae, the outer pair broadly interrupted at the suture, the inner pair extending to only a little behind the middle.

Legs reddish, the front femora usually mostly brown, the others with very broad, usually incomplete preapical brown bands; tarsi brownish except basally.

Wings cinereous hyaline, the veins yellow basally. Squamae pale brownish, with whitish base and yellowish border. Halteres yellow.

Abdomen yellow, a narrow median vitta, the fourth segment and the narrow apices of the preceding three brown, wholly cinereous yellow pollinose, the pollen on the sides and venter thinner. Sternites pale orange, the genitalia reddish but partly stained with brown.

TYPES.—Holotype, male, Victoria, Southern Rhodesia, November, 1933 under *Acacia*. Paratypes: one male, same data; two males, Salisbury, Southern Rhodesia, November 30, 1935 and four males, Salisbury, January 28, 1936, swarming under a tree in late afternoon; all collected by Mr. A. Cuthbertson.

AFROVORIA, NEW GENUS

Related to *Catalinovia* Townsend but readily distinguished by the second antennal segment being almost as long as the third.

Front somewhat wider than one eye, convex in profile, the parafrontals wider than the vitta except on the upper part; three to five pairs of proclinate orbitals; eight pairs of frontals, all more or less reclinate, the lowest situated opposite the base of the arista; a very few tiny black hairs on the parafrontals; ocellar triangle with short hairs; ocellars long and strong, proclinate-divaricate; outer verticals well developed in both sexes; occiput flat; cheeks about one-sixth as wide as the eye-height with a few bristly hairs on the lower half; parafacials wide above, rather strongly narrowing below; facial depression moderately deep, the oral margin only a little projecting. Palpi clavate, with short, appressed hairs. Antennae reaching almost to the vibrissae, the second segment two-thirds to almost as long as the third, the third with sub-parallel sides and sub-angular apex; arista thickened on the basal three-fourths, the second segment three or four times as long as wide. Eyes bare.

Infrasquamal setulae absent, the propleura and prosternum bare. Acrosticals and dorsocentrals 3-3; three intra-alars; posterior sub-lateral and posthumeral

bristles present; three sternopleurals and marginal scutellars, the apical scutellars weak; two or three pairs of short discals on the scutellum.

Legs normal in length. Anterior tibiae with two posterior bristles, the middle ones with two strong anterodorsals, the hind tibiae not closely ciliate.

Wings with a strong fold at the bend of the fourth vein, the last section of the fifth vein more than three-fourths as long as the preceding section; first vein bristled on its whole length, the third to well beyond the anterior crossvein. Squamae large.

Abdomen sub-cylindrical, almost twice as long as wide, without discals; the hairs on the fourth segment very stout; first and second segments with median marginals, the third and fourth each with a row.

GENOTYPE.—*Afrovorio munroi*, new species.

***Afrovorio munroi*, new species**

Black, with cinereous pollen. Length, 6.5 to 7.5 mm.

MALE.—Head densely white pollinose, the occiput cinereous; frontal vitta reddish brown. Palpi reddish. Antennae reddish with the third segment and arista black.

Thorax cinereous pollinose, with four blackish vittae, the median ones slender and widely separated, the outer ones broad and not interrupted at the suture. Hair black.

Legs black, with black hair.

Wings cinereous hyaline with luteous veins and yellowish base. Squamae white. Halteres yellow.

Abdomen black, the basal fourth of the second to fourth segments white pollinose. Genitalia small.

TYPES.—Holotype, male, allotype, female, and paratypes, three females, Barberton, Transvaal, February 5, 1927; five females, Barberton, February, 1927 and December 3, 1928, and two males and one female, without locality, January, 1927; male and four females, Warmbaths, Transvaal, February 16, 1920. The types are in the South African Museum.

AFROPLAGIA, NEW GENUS

Similar to *Afrovorio* with the following exceptions: eyes with moderately long whitish hair; facial ridges with strong bristles on more than the lower half; third antennal segment conspicuously longer than the elongate second; first vein bare; abdomen with discals on all but the first segment.

GENOTYPE.—*Afroplagia fasciata*, new species.

***Afroplagia fasciata*, new species**

Black, the basal two antennal segments reddish brown; squamae white; halteres reddish with the base of the knob brown. Length, 6 to 8 mm.

MALE AND FEMALE.—Head white pollinose, the bristles and hair black, the occiput yellowish haired below the neck. Palpi reddish. Thorax with cinereous pollen, the vittae narrow and weak. Wings cinereous hyaline. Second to fourth abdominal segments each with the basal third to fourth cinereous white pollinose; first segment without marginals, the second and third each with two or three pairs of discals; hair on fourth segment all bristle-like.

TYPES.—Holotype, male, Wartburg, Natal, December 27, 1915; allotype, female, Wartburg, December 31, 1915. Paratypes, two females, Wartburg, September 1, 1916. Types in South African Museum.

PRETORIANA, NEW GENUS

Differs from *Campylochaeta* Rondani in having the proboscis long and slender and the male genitalia short. The characters of the genus are contained in the specific description.

GENOTYPE.—*Pretoriana setosa*, new species.

Pretoriana setosa, new species

Black, the basal antennal segments, palpi and halteres reddish; pollen cinereous white. Length, 9 to 10 mm.

MALE.—Front much wider than one eye, the parafrontals rather thinly pollinose, the frontal vitta brownish red. Eight or nine pairs of frontals, the upper two reclinate. Parafrontals with two irregular rows of bristles, the outer extending onto the parafacials; ocellars long and strong; outer verticals two-thirds as long as the verticals. Two or three rows of black hairs behind the eyes, the occipital pile pale yellowish. Cheeks one-third as wide as the eye-height, with hairs on the lower half. Parafacials wider than the antennae, with bristly hairs on the upper half or more. Facial ridges with strong bristles on the lower three-fourths, the vibrissae long and strong. Palpi reddish, their hair short and sparse; second section of the proboscis shorter than the head-height. Antennae reaching almost to the oral margin, the third segment almost five times as long as the short second; the basal segments reddish; arista bare, thickened on almost its whole length.

Thorax moderately thickly pollinose, the mesonotum with four narrow dark vittae visible in some lights. Acrosticals 3-3; dorsocentrals 3-4; sternopleurals 2-1; three intra-alars, prealar long and strong; four pairs of marginal scutellars, the apical pair weak and decussate; four discal scutellars. Infrascapular setulae absent; propleura bare; prosternum with two or three bristly hairs on each side.

Legs black; anterior tibiae with two posterior bristles and seven antero- and posterodorsals; middle tibiae with two strong and two weak anterodorsal bristles, two long posterodorsals and a strong ventral; posterior tibiae with eight or nine anterodorsals and two strong posterodorsals. Pulvilli short.

Wings cinereous hyaline, the apical cell closed or narrowly open well before the apex of the wing; posterior crossvein much nearer the bend of the fourth vein than to the anterior crossvein; third vein bristled halfway to the small crossvein; costal spine moderately short. Squamae white, moderately broad, rounded inwardly. Halteres reddish yellow.

Abdomen black, thinly cinereous pollinose, the apices of the segments dark, the fourth shining on almost the apical half; bases of second and third segments narrowly thickly pollinose. First and second segments with pair of median marginals, the third and fourth each with a row; second and third each with several discals, the fourth with two rows and with the hair all erect and bristle-like. Sternites mostly concealed. Genital opening narrow, the genitalia small.

FEMALE.—The outer row of parafrontal bristles is replaced by an irregular row of four proclinate orbitals on each side; genital opening slit-like.

Types.—Holotype and allotype, male and female, Pretoria, South Africa, November 10, 1917. Paratypes, five males and one female, Pretoria, January 25, 1914, October 5, 1914 and November 10, 1917 (H. K. Munro). Types in South African Museum.